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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,885	06/14/2001	Keng H, Chung	JOHNS-195	5808

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EXAMINER

NORTON, NADINE GEORGIANNA

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application N .

09/879,885

Applicant(s)

CHUNG ET AL.

Examiner

Nadine Norton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Specification*

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

In claim 4, applicants' specific limitation of "90 tons/minute" lacks support in the specification.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Pfeiffer et al.(2,881,130).

Applicants are claiming a process for reducing sulfur gaseous emissions from a fluidized bed coke burner working in tandem with a fluidized bed coker reactor. The process involves circulating cold coke from the reactor to the burner, partially burning the coke in the burner, and circulating hot coke from the burner to the reactor to provide heat. Applicants' claims also contain limitations directed at the coke burner temperature and coke circulation rate.

The reference of Pfeiffer et al.(2,881,130) discloses a coking process with involves the use of a coke burner in conjunction with a coker reactor. The process involves passing stripped coke to a coker burner operated at temperature of 1000-1500° (537-185°C). See column 6, lines

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57-59. Hot coke from the burner is recycled to the reactor at a rate that is sufficient to supply the reactor with the required heat for the coking process. See column 7, lines 23-27.

The reference of Pfeiffer et al.(2,881,130) succeeds at disclosing a coking process with steps corresponding to applicants' coking, coke burning and heated coke recirculation. The aerating of the solids between the coker and coke burner inherently accomplished cooling the coke particles (column 6, lines 23-28). It is noted that the reference of Pfeiffer et al.(2,881,130) is silent about the process accomplishing the reduction of gaseous sulfur emissions. However, such reduction of sulfur emissions would inherently occur because the same process steps responsible for the sulfur emission reduction are accomplished.

Applicants' process is anticipated by the reference of Pfeiffer et al.(2,881,130) because it discloses essentially the same coke burning/ recycling steps defined in applicants' claimed process.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfeiffer et al.(2,881,130).

See the teachings of Pfeiffer et al.(2,881,130) above.

It is noted that the reference of Pfeiffer et al.(2,881,130) does not disclose applicants' specifically claimed coke recirculation rate.

Since the reference of Pfeiffer et al.(2,881,130) does not restrict the coke recirculation rate, it would have been obvious to one of ordinary skill in the art the time the invention was made to select any recirculation rate that maintains the temperature in the coking reactor, including the specific recirculation rates claimed by applicants, because Pfeiffer et al.(2,881,130) teaches that the recirculation rate is dependent on maintaining sufficient heat in the coker reactor.

#### ***Prior Art of Record***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references illustrate the relative state of the art with respect to coking processes that involve the circulation of coke between a reaction zone and coke burner.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadine Norton whose telephone number is 703-305-2667. The examiner can normally be reached on Monday through Thursday from 8:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

N.N.

May 4, 2003

**NADINE G. NORTON**  
**PRIMARY EXAMINER**

